

IN THE DRAWINGS

Please amend the drawings by replacing the drawing sheet bearing existing Figures 1 and 2 with a replacement sheet bearing amended Figure 1 and Figure 2. A legend characterizing Figure 1 as “prior art” has been added by way of the present amendment to the drawings. A copy of the replacement drawing sheet 1 of 4, bearing the designation “Replacement Sheet,” is included as an appendix at the end of this paper.

REMARKS

In order to emphasize the patentable distinctions of applicant's invention over the prior art, claim 21 has been cancelled and its subject matter presented as new claim 25. As now presented, claim 25 depends from claim 15 and requires the resonating strips used in the marker of the claimed method to be disposed in a non-parallel orientation. Claims 23 and 24, also formerly independent, have been amended to both depend from claim 22 and recite a surgical implement including a marker wherein the resonating strips are disposed in non-parallel orientation and on top and bottom sides of the biasing magnet, respectively. Claim 20 has been cancelled to expedite prosecution.

The foregoing amendment is clearly supported by the original specification; particularly at page 13, lines 4-10, and by Figs. 2-4. Consequently, no new matter has been added by way of this amendment.

The Examiner has indicated that the instant application contains claims directed to the following patentably distinct species of the claimed invention, namely the species of Figures 1, 2, 3, and 4, and has required election under 35 USC 121 of a single disclosed species for prosecution on the merits, to which the claims shall be restricted if no generic claim is finally held to be allowable.

During a telephonic interview conducted with the undersigned on September 12, 2005, a provisional election was made with traverse to prosecute the invention of Figure

2, claims 1-9, 11-16, and 18-24. Accordingly, claims 10 and 17 were withdrawn under 37 CFR 1.142(b) as being directed to a non-elected invention.

Said election of the Species of Fig. 2 is hereby confirmed, with traverse. Applicants submit that the following claims, as amended herein, read on the species of the respective Figures identified above:

<u>Figure</u>	<u>Claims</u>
1	1-5, 12-16, 18, 22
2	1-8, 11-16, 18-19, 22-25
3	1-9, 11-16, 18-19, 22-25
4	1-7, 9-19, 22-24.

Generally stated: (i) Figure 1 relates to a marker having a single resonating strip; n (ii) Figure 2 relates to a marker having two resonating strips that are substantially perpendicular, lie in substantially parallel planes, and have substantially coincident centers; (iii) Figure 3 relates to a marker having a plurality of resonating strips that are oriented in substantially non-parallel directions, lie in substantially parallel planes, and have substantially coincident centers; and (iv) Figure 4 relates to a marker having two resonating strips that lie in substantially parallel planes and are aligned in substantial parallelism on opposite sides of a bias magnet element.

It is respectfully submitted that the application includes certain claims which are generic to more than one of the species, including those set forth below:

<u>Generic to Species of Fig.:</u>	<u>Claims</u>
1, 2, 3, 4	1-5, 12-16, 18, 22
1, 2, 3	1-5, 12-16, 18, 22
2, 3	1-8, 11-16, 18-19, 22-25.

The foregoing claims are respectfully submitted to be generic to the species identified. More specifically, all the independent claims in the instant application (viz., claims 1, 2, 14, and 22) are generic to all the species.

Applicants respectfully submit that at least the species of Figures 2-3 are not distinct, inasmuch as claims directed to markers having a plurality of resonating strips that are in non-parallel relationship clearly read on both Figures. It is well established that applicants should be allowed reasonable latitude in claiming their invention, provided they do not unduly multiply the claims, which is not the case here. Ex parte Seiback 151 U.S.P.Q. 62. It is submitted that the fields of search involved in examining the claims directed to the species identified would, as a practical matter, be essentially co-extensive and the best interests of the public would be served by having all of the claimed subject matter in the same application.

Accordingly, reconsideration of the restriction requirement is respectfully requested.

The Examiner has objected to Figure 1, indicating that it apparently shows only that which is old. Accordingly, submitted herewith is a replacement sheet bearing drawing Figures 1 and 2, wherein a legend characterizing Figure 1 as depicting prior art has been added. It is submitted that the objection raised by the Examiner has thereby been mooted. Reconsideration of the objection to Figure 1 is respectfully requested.

The Examiner has rejected claims 1-5, 14-16, 18, 19, and 22 under 35 USC 102(b) as being anticipated by US Patent No. 5,057,095 to Fabian, which discloses a surgical implement detector utilizing a resonant marker. In one embodiment, the marker is magnetomechanical.

With respect to claims 1, 2, 14, and 22, the Examiner has indicated that Fabian teaches a magnetomechanical marker having a resonant frequency in the range of 0-1 GHz, which includes the 70-300 kHz range delineated by claims 1, 2, 14, and 22. Applicant respectfully observes that the cited teaching in fact discloses the range of “below about 1 gigahertz” (col. 4, line 1), but delineates three distinct types of resonance, i.e. magnetomechanical, electromechanical, and electromagnetic. Nothing in the Fabian reference specifically associates a 0-1 GHz range with a magnetomechanical marker. Clearly there is no disclosure of the particular 70-300 kHz range delineated by claims 1, 2, 14, and 22, and there are no species of magnetomechanical marker disclosed for which any particular numerical value of frequency is recited, let alone any species operative within the 70-300 kHz range. To the contrary, the only disclosure in Fabian of a particular species pertinent to a magnetomechanical marker is at col. 8, lines 6-23, in

which testing was carried out using a “conventional magnetomechanical system.” Applicant respectfully maintains that one having ordinary skill in the art would recognize that conventional magnetomechanical systems would operate at much lower frequencies than the claimed 70-300 kHz range, with 58 kHz being a typical operating frequency at which the marker is resonant. Accordingly, it is submitted that any disclosure of Fabian falls far short of rebutting the novelty of the subject matter of claims 1, 2, 14, and 22.

Furthermore, it is submitted that one of ordinary skill in the art would immediately recognize that it would be impossible to construct a magnetomechanical marker having a resonant frequency of 1 GHz. Such a frequency is a factor of over 17,000 times larger than the 58 kHz of a typical magnetomechanical marker. Therefore, the resonant element of a 1 GHz marker would have to be 17,000 times shorter than the 1.5” length of the resonant element in a typical 58 kHz marker, and would be clearly impossible to construct, and would have such a miniscule volume as to produce an undetectably small signal, even if it could be constructed.

Applicant further submits that nothing in the Fabian reference would suggest a magnetomechanical marker wherein the resonant element has a resonant frequency in the range of about 70 to 300 kHz. As set forth at page 8, line 19 to page 9, line 3; page 18, lines 1-15; and page 18, line 23 to page 19, line 10, a marker constructed to operate within such a frequency range advantageously is smaller in size than conventional magnetomechanical markers used in connection with a surgical implement, such as that disclosed by Fabian, but nevertheless has an adequate volume of magnetic material to emit a signal that is large enough to permit highly reliable, rapid detection of the marker

in the adverse environment of surgery. Clearly, speed and reliability of detection are of paramount importance in such a situation. In addition, the compact size permits surgical items to be tagged that would be physically impossible to tag using larger conventional markers.

Therefore, applicants respectfully maintain that Fabian falls far short of the specificity of disclosure that would be required to properly ground a *prima facie* anticipation of claims 1-5, 14-16, 18, 19, and 22. Absent disclosure that every feature recited by a claim is disclosed by a single reference, either explicitly or implicitly, such a rejection is impermissible, as the Federal Circuit has repeatedly held. See, e.g., in the context of chemical arts, *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 51 USPQ2d 1943 (Fed. Cir. 1999). [“To anticipate a patent claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently...When a patent claims a chemical composition in terms of ranges of elements, any single prior art reference that falls within each of the ranges anticipates the claim; a single prior art species within the patent's claimed genus reads on the generic claim and anticipates. *Id.* at 1346.]

It is established law that a reference that describes subject matter delineated by a numerical range of composition does not *per se* anticipate a claim delineating a different range merely because of the overlap of such ranges. While the numerical range recited in the present instance by claims 1, 2, 14, and 22 admittedly is a frequency range, not a chemical composition range, applicants nevertheless maintain that the recited range clearly defines the structure of the marker, so that the same law is apposite. While the

existence of a prior art species falling within a claimed generic range has been held to anticipate the claimed genus, in the present instance no species of Fabian has been identified that falls within the claimed ranges. Absent such an identified species, a case-specific factual analysis is required to establish possible anticipation. *Ex parte Cole*, 2001 WL 1918535 (BPAI, 2001), quoting *Ex parte Lee*, 31 USPQ2d 1105, 1107 (BPAI, 1993). Explaining the nature of the factual analysis, the Board of Patent Appeals and Interferences required a determination of the specificity of disclosure. [“Where, as here, a reference describes a class of compositions, the reference must be analyzed to determine whether it describes a composition(s) with sufficient specificity to constitute an anticipation under the statute. *Ex parte Lee*, supra, at 1106-1107, emphasis added, citing *In re Schaumann*, 572 F.2d 312, 197 USPQ 5 (CCPA 1978).]

In the present instance, the Examiner has alleged anticipation by Fabian. Applicants respectfully disagree. Clearly, the particular range limitations of applicants’ claims 1, 2, 14, and 22 (“from about 70 to 300 kHz”) are nowhere to be found in Fabian. Even less is there disclosure or suggestion of the preferred ranges of claims 12 and 13. Moreover, the Examiner’s analysis does not address any teaching in Fabian indicating that one would know the claimed ranges, and thereby rise to the level of specificity required to constitute anticipation under *Lee*. The Examiner has merely made the undisputed and unremarkable observation that a 70-300 kHz range numerically falls within the vastly broader and alleged 0-1 GHz range.

Applicants thus maintain that Fabian fails to disclose every feature delineated by independent claims 1, 2, 14, and 22. Even less does Fabian disclose every feature of

dependent claims 2-5, 15-16, 18, and 19, as amended which are submitted to be novel for at least the same reasons as claims 1, 2, 14, and 22.

Moreover, applicants submit that nothing in Fabian would lead a skilled artisan to the particular frequency range required by applicants' claims. Such a range surprisingly and unexpectedly permits the present magnetomechanical technology to be extended to a far wider range of surgical implements than would be possible using the much larger prior-art tags needed for operation at conventional magnetomechanical frequencies. Such lack of disclosure even further rebuts any purported conclusion that Fabian provides the requisite level of specificity of disclosure. ["If the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with 'sufficient specificity' to constitute an anticipation of the claims. The unexpected results may also render the claims unobvious." MPEP 2131.03 (II).]

In view of the foregoing remarks, it is submitted that the system of claims 1-5, the method of claims 14-16 and 18-19, and the implement of claim 22 are novel over Fabian.

Accordingly, reconsideration of the rejection of claims 1-5, 14-16, 18-19, and 22 under 35 USC 102(b) as being anticipated by Fabian is respectfully requested.

Claims 6-8, 20, and 23 were rejected under 35 USC 103(a) as being unpatentable over Fabian in view of US Patent Publication No. 2002/0005783 to Irrizary et al., which

provides a child monitoring device. Inasmuch as claim 20 has been cancelled, this rejection will be discussed in terms of remaining claims 6-8 and 23, as amended.

The Examiner has acknowledged that Fabian fails to disclose a marker wherein the magnetomechanical element comprises a plurality of elongated strips, as required by claims 6-8, 20, and 23, but has cited Irrizary et al. as allegedly disclosing such a structure, e.g. at paragraph [0034]. Applicant respectfully submits that the tag of Irrizary et al. comprises two magnetomechanical markers, having elongated axes that are perpendicular. Whereas each of the mechanical markers (e.g. markers 25 and 26 of tag 21 shown in Fig. 2) of Irrizary et al. separately includes a magnetomechanical elongated strip, applicant's marker includes a magnetomechanical element comprising a plurality of elongated strips. As set forth by claim 4, feature (c), on which claim 6 depends, a housing encloses the magnetomechanical element and the bias means. Therefore, it is respectfully submitted Irrizary et al. does not disclose a marker wherein a magnetomechanical element comprises plural strips that together constitute a magnetomechanical element and are together enclosed in a housing. Rather, the Irrizary et al. marker comprises multiple magnetomechanical elements that are enclosed in separate housings.

It is thus respectfully submitted that even in combination, Fabian and Irrizary et al. do not disclose or suggest the system delineated by applicant's claims 6-8 and the surgical implement of claim 23, as amended.

Accordingly, reconsideration of the rejection of claims 6-8, 20, and 23 under 35 USC 103(a) as being unpatentable over Fabian in view of Irrizary et al. is respectfully requested.

Claims 9, 11-13, 21 and 24 were rejected under 35 USC 103(a) as being unpatentable over Fabian in view of Irrizary et al. and further in view of US Patent 6,359,563 to Herzer and US Patent 6,407,676 to Tanji et al. Inasmuch as claim 21 has been cancelled in favor of new claim 25, this rejection will be discussed in terms of claims 9, 11-13, 24, and 25, as amended.

Herzer provides a magneto-acoustic marker for electronic article surveillance having reduced size and high signal amplitude. Tanji et al. provides a magnetostrictive resonator appointed to be embedded in a roadway for use in connection with a vehicle detection system.

The Examiner has acknowledged that the combination of Fabian and Irrizary et al. fails to disclose a configuration having first and second magnetomechanical strips on either side of a bias magnet, but contends that Herzer teaches use of a plurality of resonator pieces to allow the width of the marker to be reduced and that Tanji et al. teaches placing resonators on both sides of the bias magnet to allow the marker to be made smaller.

However, applicant respectfully submits that even in combination, Fabian, Irrizary et al., Herzer, and Tanji et al. fail to teach the claimed frequency range of about 70 to 300 kHz, as delineated by claims 1, 2, 14, and 22, on which claims 9, 11-13, and 24, and new claim 25, depend. Accordingly, it is submitted that claims 9, 11-13, 24, and 25 are patentable for at least the same reasons as claims 1, 2, 14, and 22, as set forth hereinabove.


Accordingly, reconsideration of the rejection of claims 9, 11-13, 21, and 24 under 35 USC 103(a) as being unpatentable over Fabian in view of Irrizary et al. and further in view of Herzer and Tanji et al. is respectfully requested.

In view of the amendments to claims 23-24, the cancellation of claims 20-21, and the foregoing remarks, it is respectfully submitted that the present application has been placed in allowable condition. Reconsideration of the rejection of claims 1-9, 11-16, and 18-24, and allowance of the present application, as delineated by amended claims 1-9, 11-16, and 18-24, together with newly presented claim 25, are, therefore, earnestly solicited.

Respectfully submitted,

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